

REMARKS

Claims 3, 7, 9, 12, 16, 18 have been canceled without prejudice or disclaimer. Claims 2, 5, 6, 10, 11, 14, 15 have been amended. The amended claims are supported by the specification. See, for example, pages 5-7; page 12, line 15-page 14, line 31.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

I. The Rejection of Claims 1-23 under 35 U.S.C. 103(a)

Claims 1-23 are rejected under 35 U.S.C. 103(b) as being unpatentable over Zhou et al. in view of Disher or vice versa (Disher in view of Zhou et al.). The Examiner states that Zhou et al. disclose detergent vesicular preparations prepared from diblock copolymers of propylene oxide and ethylene oxide, see Office Action mailed June 23, 2005 at page 2, and that the vesicular preparations further contain surfactants and enzymes. *Id.* The Examiner concedes that Zhou et al. do not teach that the vesicles are made entirely from Pluronic and their examples indicate the use of vesicles prepared from novasomes, *which contain only 20% non-ionic surfactant and the rest lipids.* June 23, 2005 Office Action at page 2 (emphasis added). Although the Examiner acknowledges that Zhou et al. do not teach the present invention, the Examiner argues that the present invention is obvious over Zhou et al. in view of Disher (or vice versa), because Disher teaches that amphiphilic diblock polymers (polyethylene oxide-polyethylethylene) like phospholipids when dispersed in water self-assemble into lamellar structures (vesicles) and the vesicles thus formed are tough vesicles and are useful for encapsulation. See June 23, 2005 Office Action at pages 2-3. The Examiner concludes from this reading of Zhou et al. and Disher that it would have been obvious to one of ordinary skill in the art to use vesicles made entirely from Pluronic which is an amphiphilic diblock polymer in the detergent compositions of Zhou et al. since Disher teaches that such compositions are tough. See June 23, 2005 Office Action at page 3. The Examiner posits that, alternately, to use Disher's vesicles made entirely from diblock polymers in the detergent vesicular compositions of Zhou et al. would have been obvious to one of ordinary skill in the art since Zhou et al. show that such compositions can be used to encapsulate enzymes in the laundry preparation. This rejection is respectfully traversed.

As the Examiner acknowledges, Zhou et al. do not teach the vesicles of the present invention, since Zhou et al. do not teach vesicles made entirely from Pluronic, and Zhou et al. further only teach *vesicles which contain only 20% no-ionic surfactant and the rest lipids.* See

June 23, 2005 Office Action at page 3 (emphasis added). The Examiner also concedes that Disher does not teach vesicles for use in laundry detergent applications. See, for example, June 23 Office Action at page 3. The Examiner nevertheless states that Zhou et al. is in the same field as the present invention and that Zhou et al shows that the vesicles containing the diblock polymers maintain the stability in the presence of surfactants and can be used to encapsulate enzymes. June 23, 2005 Office Action at page 3. Applicant respectfully submit that the Examiner is mistaken. As Applicant has noted previously, the teachings of Disher in view of Zhou et al. do not provide a suggestion that the vesicles of Disher are suitable for encapsulation of enzymes or suitable for compositions comprising surfactants. The fact that Zhou et al (which, as noted supra, does *not* teach vesicles made from amphiphilic polymers) is in the same field as Applicant's invention is irrelevant to whether it would have been obvious to one of ordinary skill in the art to apply the vesicles of *Disher* to encapsulate enzymes for use in detergents (which the Examiner concedes Disher does not teach). As noted in Applicant's previous response dated April 7, 2005, the suitability of a vesicular structure for encapsulation of enzymes and for use in the presence of surfactants is a delicate balance between, on the one hand, the prevention of incorporation of surfactants in the vesicular structure leading to permeation of vesicles, and, on the other hand, the ability to release the content (enzymes) of the vesicles in an application, e.g., dilution in a liquid detergent during application. The size and polydispersity of the vesicles is also crucial in order to achieve the desired properties for encapsulating enzymes. Thus, a single property of "toughness" clearly does not provide a motivation to use the vesicles for encapsulating an enzyme. Absence a motivation, the obviousness rejection is plainly improper.

Applicants further note that the claims have been amended to clarify the scope of the invention. See, for example, amended claim 2, 5, 6, 11, 14, 15.

For the foregoing reasons, Applicants submit that the claims as amended overcome this rejection under 35 U.S.C. 103(b). Applicants respectfully request reconsideration and withdrawal of the rejection.

II. The Rejection of Claims 1-23 under 35 U.S.C. 103(a)

Claims 1-23 are rejected under 35 U.S.C. 103(b) as being unpatentable over Zhou et al. in view of Disher (or vice versa), further in view of WO 97/24177. The Examiner finds unpersuasive Applicant's previous explanation of the distinction between WO 97/24177 and the present invention. This rejection is respectfully traversed.

As the Examiner notes in the Office Action mailed June 23, 2005, Applicant previously distinguished the instant invention from WO 97/24117 on the basis that WO 97/24117 discloses an encapsulation shell for an enzyme core, which is formed by in situ coacervation or condensation of a monomeric or polymeric agent and the encapsulating layer resulting from the coacervation or condensation reaction is a randomly cross-linked structure and not a vesicular structure. The Examiner finds Applicant's distinction not to be persuasive since the Examiner contends that WO 97/24177 "is suggestive of stability to detergents as well as permeability (due to osmosis) the block polymers provide even in non-vesicular systems." See Office Action mailed June 23, 2005 at page 5. The Examiner then concludes that "one of ordinary skill in the art would expect more stability and permeability of the vesicular systems of Disher and would be motivated to use these in the teachings of Zhou." Office Action mailed June 23, 2005 at 5.

As Applicants note, supra, the teachings of Disher in view of Zhou et al. do not provide a suggestion that the vesicles of Disher are suitable for encapsulation of enzymes or suitable for compositions comprising surfactants. In addition, WO 97/24177 neither teaches nor suggests use of the vesicles of Disher et al. for encapsulating enzymes and for use in combination with surfactants. WO 97/24177 discloses an encapsulation shell for an enzyme core which is formed by in situ coacervation or condensation of a monomeric or polymeric agent. See WO 97/24177 at page 5, lines 33-35, page 6, line 35 to page 7, line 5. The encapsulation layer resulting from the coacervation or condensation reaction is a randomly cross-linked (i.e., web-like or plastic-like structure), not a vesicular structure (i.e., uni- or multi-lamellar structure). This information is not instructive as to whether the vesicular structure of Discher et al. would be useful for encapsulating enzymes or is stable in a composition comprising surfactants because it is the structure which is relevant, i.e., the vesicular form, not merely its components as assembled in a different structure. As noted above, the suitability of a vesicular structure for encapsulation of enzymes and for use in the presence of surfactants is a delicate balance between, on the one hand, the prevention of incorporation of surfactants in the vesicular structure leading to permeation of vesicles, and, on the other hand, the ability to release the content (enzymes) of the vesicles in an application, e.g., dilution in a liquid detergent during application. It is unclear how it can be concluded that a composition which does not form vesicular structure provides a motivation in the art for forming and using a vesicular structure to encapsulate enzymes.

In addition, Applicants note that the claims have been amended to clarify the scope of the invention.

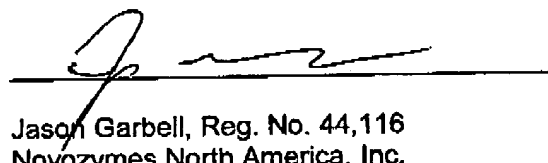
For the foregoing reasons, Applicants submit that the claims as amended overcome this rejection under 35 U.S.C. 103. Applicants respectfully request reconsideration and withdrawal of the rejection.

III. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

Respectfully submitted,

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